

# SUBJECT INDEX

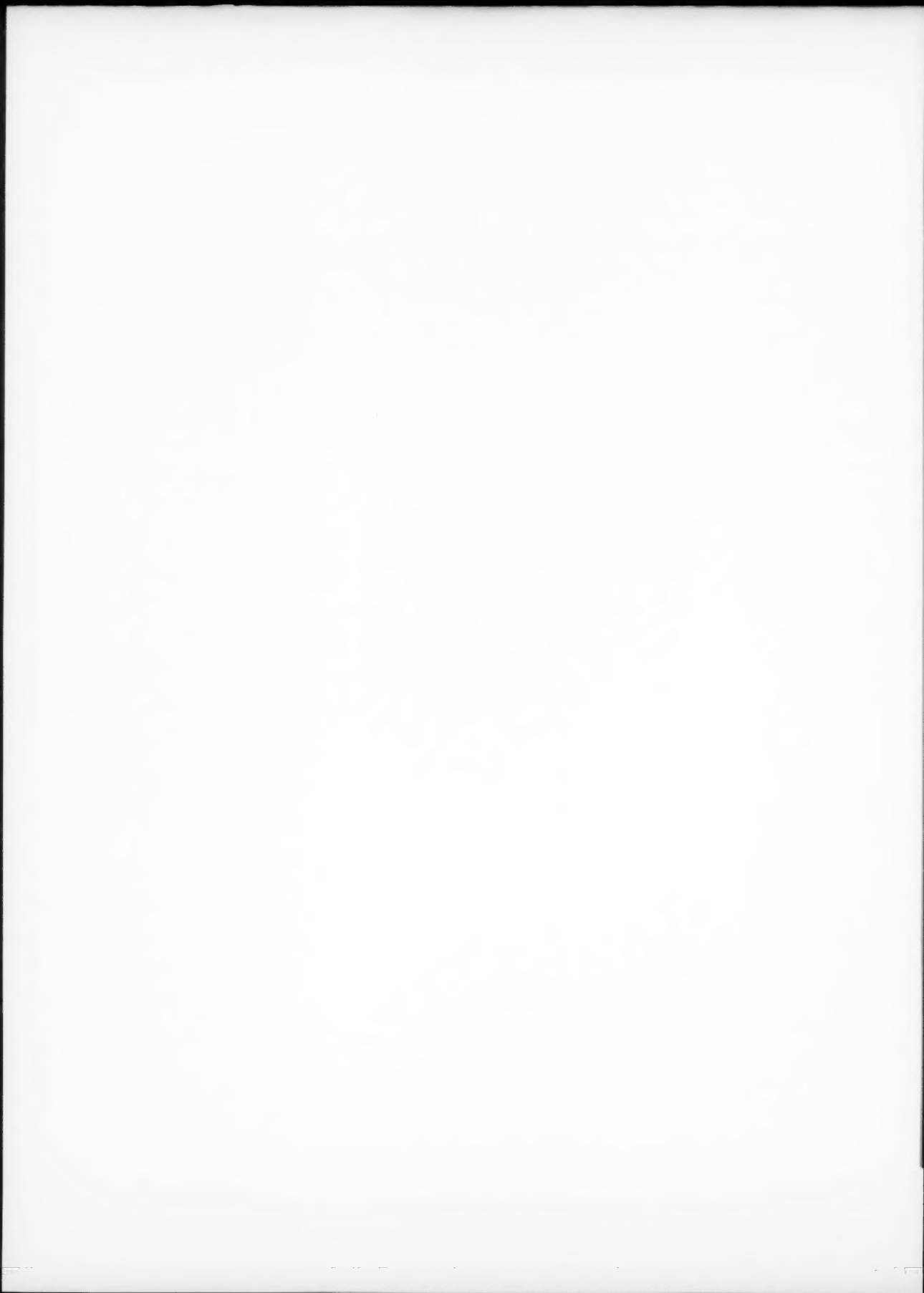
Vol. 138A, Nos. 1-4

- Abdominal gland, 79
- Absorption, 215
- Acclimatisation, 355
- Acid-base regulation, 133
- Adaptation, 327
- Aerobic metabolism, 263
- African sunbirds, 321, 441
- Age, 89
- Agnathan, 493
- Air-breathing vertebrates, 263
- Aldosterone, 321, 441
- Algae, 253
- Alkaline phosphatase, 417
- Allometry, 383
- Altricial, 89
- Amino acid profile, 533
- Amino acid receptors, 193
- Amino acids, 527
- $\gamma$ -Aminobutyric acid (GABA), 493
- Ammonia, 485
- Ammonia fluxes, 9
- Amplitude spectra, 61
- Antarctic, 391
- Antibiotics, 475
- Antioxidants, 405, 435
- Aposymbiotic, 253
- Aquaculture, 169
- Arginase, 485
- Arginine, 515, 533
- Arginine vasotocin, 441
- Arousal, 451
- Atlantic cod, 241
- Background activity, 61
- Bacterial viability, 475
- Basking shark, 485
- Baytril, 475
- Bicuculline, 493
- Big-endothelin, 355
- Bimodal breathing, 111
- Bimodal respiration, 133
- Binding proteins, 27
- Biphasic ventricular filling, 203
- Bird, 89
- Blood, 9
- Blood cells, 45
- Blood plasma, 527
- Blood volume, 187
- Body size, 269
- Body temperature, 399
- Box turtles, 269
- Breeding cycle, 187
- Breeding season, 79
- Caatinga, 327
- Calcium, 187
- Capillary density, 373
- Carbamoyl phosphate synthetase, 485
- Cardiac DNA, 147
- Cardiac output, 203, 277
- Carp, 175
- CCAP, 313
- cDNA cloning, 79
- cDNA-RDA, 221
- Cell signals, 253
- Cephalopod, 69
- Cerebellar cortex, 61
- Cerebral DNA, 147
- Channa punctatus*, 417
- Chasmagnathus granulata*, 313
- Chinook salmon, 297
- Cholesterol, 187, 305
- Circadian, 119
- Circadian rhythm, 313
- Circannual, 119
- Circulatory system, 399
- Cloacal fluid, 321
- Cnidarian, 193
- Collagen, 221
- Colon, 215
- Copper, 349
- Corals, 253
- Cortisol, 297
- Cotesia plutellae*, 39
- Courtship behavior, 79
- Crab, 313
- Critical period, 33
- Crustacea, 427
- Crustacean, 111
- Culture, 169
- Culture cell, 221
- Daidzein, 459
- DC stimulation, 467
- 3-Deoxyglucosone, 147
- 3-Deoxyhexonic acid, 147
- Development, 53
- Developmental arrest, 39
- Developmental biology, 33
- Dicarboxylic acid, 215
- Dicentrarchus labrax*, 435
- Diet, 169
- Diet preferences, 503
- Digestive enzymes, 53
- Dipnoi, 133
- Dive response, 263
- DNA modification, 147
- Dogs, 355
- Echimyidae, 327
- Echocardiography, 203
- Ectotherms, 399
- Egg, 349
- Egg laying, 459
- Egg-laying, 187
- Eggs, 435
- Elasmobranch, 363
- Elasmobranchs, 203
- Electrolyte balance, 441
- Embryos, 435
- Endocrine disruption, 427
- Endothelin-1, 355
- Enzymology, 45
- Erythrocyte, 105
- Erythrocytes, 187
- Erythropoietin, 355
- Estrogen receptor- $\beta$ , 459
- Estuarine, 363
- Estuary, 427
- European starling, 89
- Euryhaline, 363
- Euryhalinity, 287
- Evolution, 133
- Exercise, 391
- Extraction efficiency, 503
- Facilitated urea transport, 485
- Fasting, 305
- Fatty acid composition, 503
- Feed intake, 533
- Feeding, 161, 175
- Fertility, 349
- FFA, 119
- Fiber type, 373
- Fish, 391, 405
- Flatfish, 277
- Flounder, 277
- Food intake, 27

## Subject Index

- Force, 269  
 Fossorial rodent, 97  
 Free-living, 89  
 Freshwater, 363  
 Freshwater pikeperch, 9  
 Frog, 527  
  
*Gadus morhua*, 241  
 Gas exchange ratio, 133  
 Gastrointestinal microflora, 475  
 Gel filtration, 427  
 Gender, 141  
 Gene expression, 221, 229, 459  
 GH-IGF axis, 459  
*Gillichthys mirabilis*, 1  
 Gills, 287  
 Gilthead sea bream, 533  
 Glucagon, 533  
 Glucose, 515, 527  
 Glycine, 193  
 Glyoxylic acid, 69  
 GnRH, 459  
 Goldfish, 221  
 Gonadotropin-releasing hormone (GnRH), 493  
 Ground squirrel, 451  
 Growth, 459, 515  
 Growth hormone, 17, 533  
 Growth studies, 241  
 Gustatory area, 175  
 Gut sterilization, 475  
  
 Haematology, 45, 187, 341  
 HDL, 305  
 Health, 333  
 Heart, 203, 277  
 Heart rate, 399  
 Heat-shock protein, 1  
 Hematology, 333  
 Hemoglobin polymorphism, 241  
 Hibernation, 451  
 High altitude, 355  
 Hormone, 27  
 Horse, 105  
 Hsc70, 1  
 HSP70, 221  
 5-HT receptor, 69  
 Hypercapnia, 97, 111  
 Hyperoxia, 111  
 Hypoxia, 97, 111, 263, 355, 373  
 Hypoxic-hypercapnia, 97  
  
 I2CA, 193  
 IGF binding protein-3, 141  
 IGF-1, 141  
 IGF-1 receptor, 141  
 Iguana, 383  
  
 Immune-depression, 39  
 Immunohistochemistry, 69  
 In situ hybridization, 53  
 Infrared thermography, 451  
 Ingestive behavior, 327  
 Insulin, 17, 533  
 Insulin-like growth factor-I, 533  
 Intestine, 297  
 Invertebrate, 69  
 Isoform, 169  
  
*Jasus edwardsii*, 161  
  
 K<sup>+</sup>-ATPase, 297  
 $\alpha$ -Ketoglutarate, 215  
 Keyhole limpet hemocyanin (KLH), 169  
 Kidney, 383  
 Kidneys, 287  
  
 Labriform, 391  
 Lactate, 391  
 Lamprey, 485, 493, 527  
 Larvae, 161, 435  
 Laying hens, 305  
 LDH, 391  
 LDL, 305  
*Lepidosiren paradoxa*, 133  
 Leptin, 17  
 LHRH, 493  
 Lighting, 119  
 Lipids, 119  
 Lipoproteins, 305  
 Little Penguin, 333  
 Lizard, 383  
 Locomotion, 269  
 Low temperatures, 405  
 Luciferase, 1  
 Lungfish, 133  
 Lymphocyte, 515  
 Lysine, 515  
 Lysozyme, 39  
  
 Mammals, 97  
 Marine invertebrates, 405  
 Marine natural product, 169  
 Marmot, 451  
 Marsupials, 341  
 Maternal exposure, 459  
*Megathura crenulata*, 169  
 Melanophore, 313  
 Mesencephalon, 175  
 Metabolism, 97, 229, 349  
 Micro-optode, 33  
 Migratory bird, 503  
 Mitochondrial volume density, 263  
 Model, 263  
 Modified 2-deoxyribose, 147  
 Modified deoxynucleoside, 147  
  
 Modified DNA, 147  
 Molecular chaperone, 1  
 Mollusc, 69, 169  
 Muscimol, 493  
 Muscle, 391  
 Myoglobin, 263  
 Myosin heavy chain isoforms, 373  
 Mysids, 427  
  
 Na<sup>+</sup>, 297  
 Na,K-ATPase, 287  
 NaDC-1, 215  
 Nectar feeding, 321  
 Nectariniidae, 441  
*Neomysis integer*, 427  
 Neotropics, 327  
 Nestling, 89  
 Neuronal population, 61  
 Newt, 79  
 Ninhydrin positive substances, 9  
 Nitric oxide, 141  
 Nitric oxide synthase, 141  
 Nitrogen excretion, 161  
 NMDA, 193  
 Nodulation, 39  
 NPY, 175  
 Nucleotides, 105  
 Nutrition, 53, 229  
  
 Ontogeny, 53, 89, 515  
*Oncorhynchus tshawytscha*, 297  
 Ornithine urea cycle, 485  
 Osmolarity, 363  
 Osmoregulation, 287, 321, 363, 485  
 Oxidative stress, 405, 435  
 Oxygen affinity, 241  
 Oxygen consumption, 161  
  
 Pacemakers, 193  
 Pancreas, 53  
 Parr-smolt transformation, 297  
 PDH, 313  
 Pericardial pressure, 203  
 Pericardioperitoneal canal, 203  
 Pericardium, 203  
 Pharmacokinetics, 383  
 Pharmacological bioassay, 69  
 Phenoloxidase, 39  
 Photosynthesis inhibitor, 253  
 Physiological selection, 241  
 Physiology, 161  
 Pig, 17  
 Pigeons, 187  
 Pigment migration, 313  
 Plasma biochemistry, 89  
 Plasma calcium, 417  
*Plesiaestrea versipora*, 253  
*Phutella xylostella*, 39

- Polyclonal antibody, 427  
 Polydnavirus, 39  
 Polyphenism, 229  
 Post-natal development, 187  
 Probability distribution, 61  
 Prolactin, 79  
 Prolactin receptor, 79  
 Proliferation, 221  
 Prolonged starvation, 527  
 Protein, 187  
 Protein folding, 1  
 Protein source, 533  
 Pufferfish, 287  
 Pulmonary ventilation, 133  
*Punaré*, 327  
 Purkinje cell, 61  
 Pyloric ceca, 297  
  
 Receptor, 27  
 Rectal gland, 363  
 Red blood cells, 105  
 Refolding, 1  
 Rehydration, 321  
 Renal excretion, 441  
 Reptile, 383  
 Reptiles, 269  
 Respiration, 33, 349  
 Respiratory protein, 169  
 Rhinoceros, 105  
 Rhombencephalon, 175  
 Rhythms, 119  
 Rodents, 327  
 RPCH, 313  
 RT-PCR, 53  
 Ruminants, 119  
  
 Salinity, 287  
 Salinity effect, 9  
 Salmon, 349  
 Salmon calcitonin, 417  
 Salt and water balance, 363  
  
*Sander lucioperca*, 9  
 Sarcopterygii, 133  
 Scaling, 383  
 Sciaenidae, 45  
 Seasonal, 119  
 Seasonal changes, 527  
 Semi-arid, 327  
*Sepia officinalis*, 69  
 Serotonin, 69  
 Serum, 305  
 Serum biochemistry, 341  
 Serum cortisol, 341  
 Shi drum, 45  
 Silefrin, 79  
 Simulation, 61  
 Skeletal muscle, 373  
 Slope, 269  
 Small intestine, 215  
 Somatolactin, 533  
 Spike attenuation, 61  
 Spineless spine rats, 327  
 Spiny lobster, 161  
 Squamate, 383  
 SSH, 229  
*Stizostedion lucioperca*, 9  
 Stomach, 215  
 Storage, 349  
 Stress, 341, 391  
 Stroke volume, 277  
 Strychnine, 193  
 Sturgeon, 203  
 Substrate, 269  
 Surface temperature, 451  
 Swimming performance, 277  
 Symbiosis, 253  
 Symbiotic algae, 253  
  
 Tartrate-resistant acid phosphatase, 417  
 Taurine, 105, 193  
 Tectum, 467  
 Teleostei, 45  
  
 Temperature, 1, 133, 161, 221, 269, 277  
 Temperature acclimation, 241  
 Thermoregulation, 97, 399  
*Thrichomys apereoides*, 327  
 Tissue culture, 297  
 Toad, 467  
 Trade-off, 229  
 Transport, 515  
 Transporter, 215  
 Trimethylamine, 9  
 Trimethylamine oxide, 9, 485  
 Triploidy, 45  
 Trout, 349  
 Trypsinogen, 53  
 Tyrosine, 105  
  
*Ucrit*, 277  
*Umbrina cirrosa*, 45  
 Uncoupler, 349  
 Urea, 363  
 Uricolysis, 485  
 Urinary hydroxyproline, 417  
  
 Vagal lobe, 175  
 Vasomotion, 451  
 VEGF, 355  
 Ventilation, 97, 111  
 Ventricular myocyte, 141  
 Vitamin E, 435  
 Vitellin, 427  
 VLDL, 305  
  
 Water balance, 441  
 Weddell seal, 263  
 Wild rodents, 475  
 Wing differentiation, 229  
 Winter flounder, 53  
  
 Xylose, 475  
  
 Zebra, 105



# AUTHOR INDEX

*Vol. 138A, Nos. 1-4*

- Abe, A.S., 97  
Abele, D., 405  
Ahern, M., 399  
Albalat, A., 533  
Alila-Johansson, A., 119  
Amin-Naves, J., 133  
Ashwell, C.M., 27
- Bae, S., 39  
Ballarin, L., 45  
Barbaro, A., 45  
Barden, C., 269  
Barros, R.C.H., 97  
Bermudes, M., 161  
Bertotto, D., 45  
Betti, L., 175  
Bhattacharyya, S.P., 417  
Bird, J., 485  
Blážíček, P., 89  
Branco, L.G.S., 97  
Branton, S.L., 305  
Brix, O., 241  
Brocht, D.M., 27  
Buddington, K.K., 215  
Buddington, R.K., 215  
Burnett, L., 341  
Burnham, M.R., 305  
Bush, J.A., 17
- Calvert, C.C., 515  
Caperna, T.J., 27  
Cárnio, E.C., 97  
Cech, J.J., 203  
Chen, J., 459  
Chin Lai, N., 203  
Ciarcia, G., 435  
Claude, J.F., 485  
Claussen, D.L., 269  
Cloud, J.G., 349  
Coates, C.J., 229  
Colosimo, A., 241  
Cônsoi, F.L., 229  
Culver, B., 141  
Culver, C.S., 169  
Cunningham, M., 333  
Dall'Oro, M., 45  
Dalton, N., 203  
Davis, R.W., 263  
Davis, T.A., 17
- Davison, W., 391  
De Smet, L., 427  
Deane, E.M., 341  
Dillaman, R.M., 373  
Douglas, S.E., 53
- El Abed, A., 9  
Emelyanova, L.V., 527  
Eriksson, L., 119  
Esberg, L.B., 141
- Fabiani, O., 175  
Ferro, R., 435  
Fleming, P.A., 321, 441  
Francescon, A., 45  
Franklin, C.E., 363, 399  
Fujita, T., 79  
Fuson, A., 263
- Gallant, J.W., 53  
Gamperl, A.K., 277  
Gannon, A.T., 111  
Gassmann, M., 355  
Gayathri, K.L., 187  
Gerard, P.D., 305  
Ghekiere, A., 427  
Giannaccini, G., 175  
Giusti, H., 133  
Glass, M.L., 133  
Glaus, T.M., 355  
Gómez-Requeni, P., 533  
Goudkamp, J.E., 399  
Graham, J.B., 203  
Granato, F.C., 313  
Grant, A.J., 253  
Gray, D.A., 321, 441  
Green, B.S., 33  
Gregory, J.A., 203  
Grenacher, B., 355  
Grossmann, R., 459  
Guerriero, G., 435  
Gutiérrez, J., 533
- Harley, E.H., 105  
Hasunuma, I., 79  
Heath, J.E., 451  
Hegde, S.N., 187  
Henry, R.P., 111
- Hinde, R., 253  
Hofmann, G.E., 1  
Holcomb, M., 349  
Huguenin, M.A., 503  
Humphrey, B.D., 515
- Ingermann, R.L., 349
- Jackson, S., 475  
Jacobson, E.R., 383  
Janssen, C.R., 427  
Joaquim, N., 277  
Johnson, S.A., 475  
Johnson, S.C., 53  
Juráni, M., 89
- Kagawa, H., 147  
Kagawa, K., 147  
Kalauzi, A., 61  
Kanatous, S.B., 263  
Kass-Simon, G., 193  
Kato, T., 79  
Kaushik, S.J., 533  
Kavanaugh, S.I., 493  
Kikuyama, S., 79  
Kim, Y., 39  
Kinsey, S.T., 373  
Klasing, K.C., 515  
Koch, D., 355  
Kondo, H., 221  
Koroleva, E.M., 527  
Košťál, L., 89
- Laakso, M.-L., 119  
Laming, G., 467  
Laming, P., 467  
Lamošová, D., 89  
Lee, T.H., 287  
Lehr, T., 69  
Lenzi, C., 175  
Libertini, A., 45  
Lin, C.H., 287  
Lu, L., 459  
Lucacchini, A., 175  
Luedeke, J.D., 373
- Maciel, F.E., 313  
Marroni, P., 175  
Matsukawa, H., 79

# Author Index

- Maxwell, L.K., 383  
 McCall, R.D., 373  
 McKenzie, S., 341  
 McMullen, J., 169  
 McMurtry, J.P., 17, 27  
 McTee, S., 169  
 McWilliams, S.R., 503  
 Médale, F., 533  
 Mendes, L.A.F., 327  
 M'Hetli, M., 9  
 Michaels, J., 203  
 Miura, S., 79  
 Morse, D.E., 169  
 Mukherjee, D., 417  
 Murray, H.M., 53
- Navarro, I., 533  
 Nery, L.E.M., 313  
 Ni, Y., 459  
 Nicolson, S.W., 321, 441, 475
- Oakes, F.R., 169
- Paglia, D.E., 105  
 Pajor, A., 215  
 Peebles, E.D., 305  
 Perez-Casanova, J.C., 53  
 Pérez-Sánchez, J., 533  
 Perry, S.F., 327  
 Phillips, P.K., 451  
 Pierce, B.J., 503  
 Pierobon, P., 193  
 Pierzynowski, S., 215  
 Pillans, R.D., 363  
 Pirone, A., 175  
 Place, A.R., 503  
 Place, S.P., 1
- Polasek, L., 263  
 Puntarulo, S., 405
- Ramsay, T.G., 17  
 Reiner, B., 355  
 Ren, J., 141  
 Ribeiro, M.F.S., 327  
 Ritar, A.J., 161  
 Rocha, P.L.B., 327  
 Rogers, T., 333  
 Rojas, P., 533  
 Root, A.R., 493  
 Rosa, C.E., 313  
 Ruggieri, R.D., 193  
 Russo, G.L., 435
- Sadok, S., 9  
 Sanford, J.D., 493  
 Savina, M.V., 527  
 Schipp, R., 69  
 Scott, G.I., 141  
 Seebacher, F., 399  
 Sen, U., 417  
 Sergeant, N., 333  
 Shenoy, K.B., 187  
 Snashall, J., 269  
 Soveri, T., 119  
 Sower, S.A., 493  
 Spasic, S., 61  
 Spinelli Oliveira, E., 327  
 Starke-Peterkovic, T., 253  
 Stephensen, C.B., 515  
 Sterritt, L., 467  
 Thivierge, M.C., 17  
 Thorkildsen, S., 241  
 Tian, H.-S., 229  
 Tironi, T.S., 313
- Tsai, R.S., 287  
 Tuckey, N., 391  
 Turnbull, S., 485
- Uglow, R.F., 9
- Van Beeumen, J., 427  
 Vargas, M.A., 313  
 Vega-Rubin de Celis, S., 533  
 Veillette, P.A., 297  
 Verslycke, T., 427  
 Vinson, S.B., 229  
 Výboh, P., 89
- Wagner, G.N., 277  
 Walker, R.J., 261  
 Walzem, R.L., 305  
 Wang, Y., 459  
 Wang, Y.S., 485  
 Watabe, S., 221  
 Watson, R., 263  
 Weber, B.W., 105  
 Wilkie, M.P., 485  
 Williams, T.M., 263  
 Withers, K.J.T., 253  
 Woolsey, J., 349
- Yamamoto, K., 79  
 Young, G., 297  
 Youson, J.H., 485
- Zeman, M., 89  
 Zhang, X., 141  
 Zhao, R., 459  
 Zhou, Y., 459  
 Zippay, M.L., 1

